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**PATENT** 

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## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:

Ingeborg Dreher et al.

Art Unit:

Not yet assigned

Serial No.:

10/530,987

Examiner:

Not yet assigned

Filed:

April 12, 2005

Customer No.:

21559

Title:

**ANTAGONISTS IL-15** 

Mail Stop Amendment Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

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Applicants submit the references listed on the enclosed Form PTO-1449, copies of which are enclosed, with the exception of U.S. patents and U.S. patent application publications.

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Respectfully submitted,

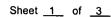
Date: 4 May 2005

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SUBSTITUTE FORM PTO-1449 (MODIFIED)

(37 C.F.R. § 1.98(b))

U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use several sheets if necessary)

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Serial No.

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Applicant

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Examiner's	Document	Publication	Patentee or Applicant	Class	Subclass	Filing Date
Initials	Number	Date				(If Appropriate
	5,750,825	05/12/98	Yazaki et al.			
	5,698,765	12/16/97	Mak			
<del>-</del>	5,625,122	04/29/97	Mak			
	5,583,278	12/10/96	Alt et al.			
	4,736,866	04/12/88	Leder et al.		-	
	FOREIG	SN PATENT OF	L R PUBLISHED FOREIGN PATENT A	APPLICATION	N	<u> </u>
Examiner's Initials	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation (Yes/No)
	WO 01/32855	05/10/01	WIPO			
	WO 98/36052	08/20/98	WIPO			•
	WO 97/41232	11/06/97	WIPO			
	WO 97/11689	04/03/97	WIPO			Abstract
	WO 96/26274	08/29/96	WIPO			
	EP 0 944 398 B1	04/07/04	Europe			
	EP 0 889 723 B1	06/05/02	Europe			Claims
	EP 0 916 336 A1	05/19/99	Europe			
	DE 19625049 A1	01/02/98	Germany			No
	OTHER DOCUM	IENTS (INCLU	DING AUTHOR, TITLE, DATE, PLA	CE OF PUB	LICATION)	<u> </u>
	Behr et al., "Efficien Proc. Natl. Acad. So	t gene transfer ci. USA 86: 698	into mammalian primary endocrine (2-6986 (1989).	cells with lip	opolyamine-c	coated DNA,"
	Beveridge et al. "Lymphomas and Lymphoproliferative Lesions Developing Under Cyclosporin Therapy," The Lancet 1:788 (1984).					

EXAMINER		DATE CONSIDERED

EXAMINER: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with the next communication to applicant.

SUBSTITUTE FORM PTO-1449	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	Attorney Docket No.	50125/101001
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(Ose several silvers in necessary)		Group	Not yet assigned ·
(37 C.F.R. § 1.98(b))		IDS Filed	May 4, 2005

	Felgner et al., "Enhanced Gene Delivery and Mechanism Studies with a Novel Series of Cat Formulations," <i>The Journal of Biological Chemistry</i> 269: 2550-2561 (1994).	ionic Lipid
	French et al., "The Molecular and Biochemical Characterization of Mutant Monoclonal Antibonism and Biochemical Characterization and Biochemical C	odies With Increased
	Giri et al., " Utlization of the $\beta$ and $\gamma$ chains of the IL-2 receptor by the novel cytokine IL- 15," 13: 2822-2830 (1994).	The EMBO Journal
	Gossen et al., " Inducible gene expression systems for higher eukaryotic cells," Biotechnology	gy 5: 516-520 (1994).
	Grabstein et al., "Cloning of a T Cell Growth Factor That Interacts with the β Chain of the Int Receptor," Science 264: 965-968 (1994).	erleukin – 2
	Huck et al., "Sequence of a human immunoglobulin gamma 3 heavy chain constant region gwith the other human Cγ genes," <i>Nucleic Acids Research</i> 14:1779-1789 (1986).	gene: comparison
	Khromykh, "Replicon-based vectors of positive strand RNA viruses," <i>Current Opinion in Mol</i> 2: 555-569 (2000).	ecular Therapeutics
	Kichler et al., "Influence of Membrane-Active Peptides on Lipospermine/DNA Complex Med Bioconjugate Chem. 8: 213-221, (1997).	iated Gene Transfer,"
	Kim et al., "Targeting the IL-15 Receptor with an Antagonist IL-15 Mutant/Fcγ2a Protein Bloch Hypersensitivity," <i>The Journal of Immunology</i> 160: 5742-5748 (1998).	, ,,,,
	Kivisakk et al., "IL-15 mRNA expression is up-regulated in blood and cerebrospinal fluid mormultiple sclerosis (MS)," Clinical and Experimental Immunology 111:193-197 (1998).	nonuclear cells in
	Krawinkel et al., "Comparison of the hinge-coding segments in human immunoglobulin gam genes and the linkage of the gamma 2 and gamma 4 subclass genes," The EMBO Journal	I: 403-407 (1982).
	Lindemann et al., "Versatile Retrovirus Vector Systems for Regulated Gene Expression In V Molecular Medicine 3 466-476 (1997).	itro and In Vivo,"
	Mackie et al., "Dose-Related Mechanisms of Immunosuppression Mediated By Murine Anti- Antibody in Pancreatic Islet Cell Transplantation and Delayed-Type Hypersensitivity," <i>Transp</i> 1154 (1990).	-CD3 Monodonal colantation 49:1150-
	Paterson et al., "Variation in IgG1 heavy chain allotype does not contribute to differences in two human anti-Rhesus (D) monoclonal antibodies," <i>Immunotechnology</i> 4: 37-47 (1998).	biological activity of
	Penn et al., "The Changing Pattern of Posttransplant Malignancies" <i>Transplantation Proceed</i> (1991).	dings 23: 1101-1103
	Pettit et al., "Structure-Function Studies of Interleukin 15 using Site-specific Mutagenesis, Po Conjugation, and Homology Modeling," <i>The Journal of Biological Chemistry</i> 272(4): 2312-23	
	Pink et al., "Human Immunoglobulin Subclasses-Partial Amino Acid Sequence Of The Cons Chain," <i>Biochem. J.</i> 117:33-47 (1970).	tant Region Of A γ4
	Plank et al., "The Influence of Endosome-disruptive Peptides on Gene Transfer Using Synth Transfer Systems," <i>The Journal of Biological Chemistry</i> 269(17) 12918-12924 (1994).	etic Virus-like Gene
	Rückert et al., "IL-15-IgG2b fusion protein accelerates and enhances a Th2 but not a Th1 im vivo, while IL-2-IgG2b fusion protein inhibits both," Eur. J. Immunology 28: 3312-3320 (1998)	
	Sakai et al., "Interleukin 15 Activity in Rectal Mucosa of Inflammatory Bowel Disease," Gastr 114:1237-1243 (1998).	oenterology .
	Schwartz et al., "Synthetic DNA-compacting peptides derived from human sequence enhancemediated gene transfer in vitro and in vivo," Gene Therapy 6: 282-292 (1999).	æ cationic lipid-
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Sheet <u>3</u> of <u>3</u>

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Shlomchik et al., "The role of clonal selection and somatic mutation in autoimmunity," <i>Nature</i> 328: 805-811 (1987).
Sikorav et al., "Structure of the constant and 3' untranslated regions of the murineBalb/cγ2a heavy chain messenger RNA," <i>Nucleic Acids Research</i> 8: 3143-3155 (1980).
Springer et al., "VEGF Gene Delivery to Muscle: Potential Role for Vasculogenesis in Adults," <i>Molecular Cell</i> 2:549-558 (1998).
 Tinubu et al., "Humanized Antibody Directed to the IL-2 Receptor β-Chain Prolongs Primate Cardiac Allograft Survival," <i>The Journal of Immunology</i> 153:4330-4338 (1994).
Uhlmann et al., "Antisense Oligonucleotides: A New Therapeutic Principle," <i>Chemical Reviews</i> 90:544-584 (1990).
Wang et al., "The Primary Structure of a Human IgG2 Heavy Chain: Genetic, Evolutionary, and Functional Implications" <i>The Journal of Immunology</i> 125(3): 1048-1054 (1980).
Wels et al., "Structural analysis of the murine IgG3 constant region gene," <i>The EMBO Journal</i> 3: 2041-2046 (1984).
Zheng et al., "IL-2 Receptor-Targeted Cytolytic IL-2/Fc Fusion Protein Treatment Blocks Diabetogenic Autoimmunity in Nonobese Diabetic Mice," <i>The Journal of Immunology</i> 163: 4041-4048 (1999).
Zhou et al., "DNA transfection mediated by cationic liposomes containing lipopolylysine:characterization and mechanism of action," <i>Biochimica et Biophysica Acta</i> 1189: 195-203 (1994).

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